

Application No.: 10/757,388

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AMENDMENTS TO CLAIMS

1. (Currently amended) A lead frame comprising:
a lead frame body comprising a sheet-shaped body made of metal;
a groove portion for forming a lead which is formed by a predetermined depth in a lead forming region on a surface of the lead frame body; and
a lead having a portion which protrudes from the groove portion laterally onto the surface of the lead frame body so as to be in contact with said surface, the lead completely filling the groove portion and being made of material different from material of the lead frame body,
the lead including: a first conductor layer formed in the groove portion;
a second conductor layer formed on the first conductor layer; and
a third conductor layer formed on the second conductor layer, wherein
the first conductor layer is assembled to an assembling member, and
the third conductor layer is assembled to a die pad of a semiconductor chip,
wherein the lead includes a barrier layer for suppressing a reaction between the lead frame body and the first conductor layer, the barrier layer being provided on a part of the groove portion so as to be in contact with the lead frame body in the groove portion, and
wherein the barrier layer is made of any one of nickel, titanium or tungsten.

2. (Cancelled)

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3. (Currently amended) A lead frame according to claim **[[2]] 1**, wherein the first conductor layer covers an entire inner wall of the groove portion through a buffer layer.
4. (Withdrawn – currently amended) A lead frame according to claim **[[2]] 1**, wherein an interface of the first and the second conductor layer is located above the surface of the lead frame body.
5. (Currently amended) A lead frame according to claim **[[2]] 1**, wherein the barrier layer is made of nickel.
6. (Withdrawn – currently amended) A lead frame according to claim **[[2]] 1**, wherein the first conductor layer is made of metal capable of forming an alloy together with solder.
7. (Withdrawn – currently amended) A lead frame according to claim **[[2]] 1**, wherein the film thickness of the first and the second conductor layer is 0.5 to 2 μm .
8. (Withdrawn – currently amended) A lead frame according to claim **[[2]] 1**, wherein the first conductor layer comprises a gold layer.
9. (Withdrawn – currently amended) A lead frame according to claim **[[2]] 1**, wherein the third conductor layer comprises a gold layer.

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10. (Withdrawn – currently amended) A lead frame according to claim [[2]] 1, wherein the second conductor layer comprises a metallic layer, the primary component of which is nickel.

11-18. (Canceled)

19. (Previously presented) A semiconductor device comprising:

a semiconductor chip;

a multi-layer lead connected to the semiconductor chip and having a first conductor layer;
and

a piece of sealing resin, wherein a portion of the reverse face of the multi-layer lead protrudes from a principal plane of the piece of sealing resin, the first conductor layer covering an entire surface of said portion and including a part within an enclosed groove of the piece of sealing resin,

wherein the multi-layer lead contacts a surface of the semiconductor chip, and
a part of the multi-layer lead except the portion of the multi-layer lead protruding from the principal plane of the piece of the sealing resin is sealed within the piece of the sealing resin.

20. (Previously presented) A semiconductor device according to claim 19, the multi-layer lead further including: a second conductor layer laminated inside the first conductor layer; and a third conductor layer formed inside the second conductor layer.

21. (Withdrawn) A semiconductor device according to claim 20, wherein an interface of the first and the second conductor layer is located inside the surface of the sealing resin.

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22. (Withdrawn) A semiconductor device according to claim 19, wherein the first conductor layer is made of metal capable of forming an alloy together with solder.

23. (Withdrawn) A semiconductor device according to claim 19, wherein the film thickness of the first and the second conductor layer is 0.5 to 2 μm .

24. (Withdrawn) A semiconductor device according to claim 20, wherein the first conductor layer comprises a gold layer.

25. (Withdrawn) A semiconductor device according to claim 20, wherein the third conductor layer comprises a gold layer.

26. (Withdrawn) A semiconductor device according to claim 20, wherein the second conductor layer comprises a metallic layer, the primary component of which is nickel.

27-31. (Canceled)

32. (Previously presented) A semiconductor device according to claim 19, wherein a surface of the first conductor layer facing away from the semiconductor chip is uncovered.

33. (Previously presented) A semiconductor device according to claim 19, wherein the multi-layer lead is in direct contact with a surface of the semiconductor chip.